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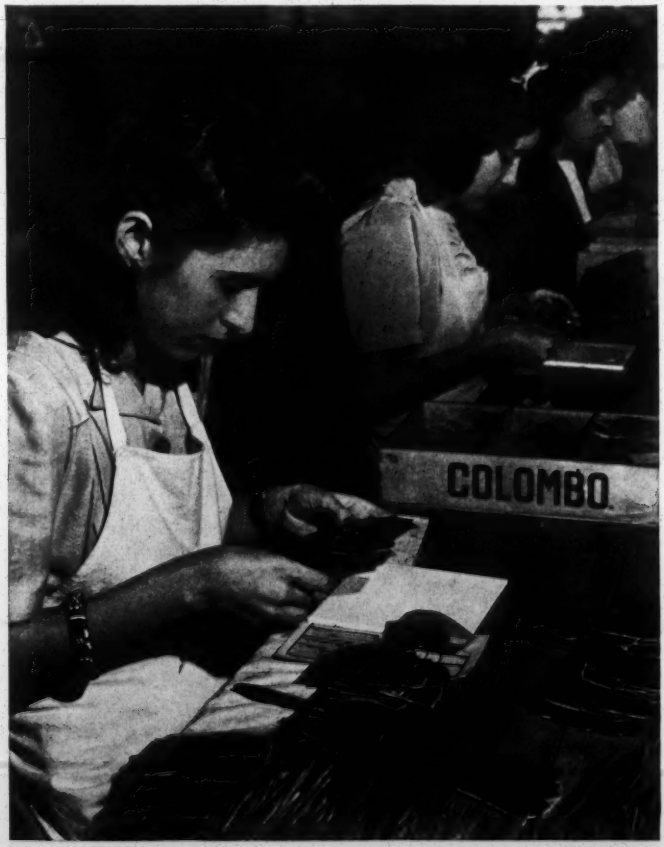

W. ROBERT MOORE

GIRLS IN BRAZIL (Bulletin No. 2) SPLIT AND CUT MICA INTO MARKETABLE SIZES

Bulletin No. 1, October 30, 1950

Amboina, Spice Isle, Reports Double Trouble

AMBOINA, a bit of eastern Indonesia once known round the world as a spice center, recently has reported two kinds of trouble—man-made and natural. Earthquakes with resultant "tidal waves" hit the island in the midst of a bloody revolt against the Indonesian government.

Amboina is 1,500 miles east of Jakarta (Batavia), capital of the sprawling United States of Indonesia, recently admitted to the United Nations as the 60th member. It is in the group of islands known as the Moluccas, halfway between the Philippines and Australia.

Bombed in Turn by Japs and Allies

About 33 miles long and ten miles wide, Amboina lies in the Banda Sea southwest of the much larger island of Ceram. To the east 300 miles is mountain-studded New Guinea.

The chief town has the same name as the island. It is the capital of all the Moluccas. Of the island's 51,000 people, 17,000 live in the town. Port facilities include wharves and warehouses. Under Netherlands rule the port became a supplementary naval base during World War II for the defense of the eastern front of the archipelago. The harbor was a frequent bombing target, first for the Japanese, and later for the Allies after the Japs took the island in 1942.

The Portuguese founded Amboina town in the 16th century, expecting to make it the clove capital of the world. Even at that early date, it attained an important trade in cloves and nutmeg. After less than a century of Portuguese development, the Dutch seized the town and its trade. Later, the English fought for the prize. Amboina still ships spices, but the transplanting of clove trees to Zanzibar doomed Amboina's monopoly. Today, most of the world's spice comes from Zanzibar, Pemba, and Madagascar—islands of varying size off Africa's east coast.

Amboina island is shaped like a mitten, with a southward-opening inlet between thumb and fingers. On the inlet's eastern shore stands the town of Amboina (from the Malay word for "mist"). A low isthmus connects the thumb and the hand—the island's two rugged and unequal parts. Granite mountains form the backbone of each section.

Sago Bread Is Staff of Life

Though the island is small, the climate and vegetation differ on the opposite shores. And so does the population. Christians predominate in the south and in the town, while Mohammedans live mostly in the north.

Main crops are coconut and sago palms (illustration, next page). The islanders also grow cloves, nutmeg, and a variety of tropical fruit trees. Other crops include sugar cane, rice, coffee, and cacao.

Agriculture is not more developed because the natural food supply is abundant enough for most needs of the populace. Sago bread is the Amboinese staff of life. A single palm yields hundreds of pounds of sago in return for a day's work.

ENTERED AS SECOND CLASS MATTER ARRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
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MAYNARD OWEN WILLIAMS

TOWNSFOLK CROWD THE DOCK AT AMBOINA (Bulletin No. 1) TO WATCH A SHIP DEPART

This town in east Indonesia was a center of the spice trade for so long that some of the old prosperity has survived. Always noted for cleanness, Amboina enjoys a relatively high standard of living. Copra (dried coconut meat) is a leading export from these warehouses. "Goedang" on the sign means warehouse; the word is often anglicized into "godown." Chinese characters reveal Chinese interest in Amboina's trade. Dutch words on the white building say "customs office."

Bulletin No. 2, October 30, 1950

Brazil Is South America's Geographic Giant

BRAZIL, which recently held a presidential election, occupies nearly half of South America to rank as one of the geographical giants of the Western Hemisphere.

The vast republic, which proclaimed its freedom from Portugal on September 7, 1822, roughly equals the United States plus Alaska. Canada slightly surpasses it in size. The Brazilian coast extends twice the distance from Portland, Maine, to Key West, Florida.

Extensive Natural Resources

Through this largely tropical area spreads a panorama of populous coastal cities, coffee plantations and fertile farms, mysterious rivers, forests, and untrod mountains. The Amazon River and its surrounding jungles stretch across the northern part of the country from the Atlantic to the Andes.

Riches comparable to its size lie above and below Brazil's surface. About half the world's coffee is grown there. Corn, cotton, and cocoa are increasing in value. Rubber is a great natural product. Foresters cut mahogany, rosewood, and ebony. Large numbers of cattle and hogs roam ranchlands. Brazil is the chief source of carnauba wax, used for electric insulation and phonograph records.

Only in Brazil, too, is high-grade quartz crystal found in commercial quantities. Extensive but comparatively undeveloped iron-ore deposits supply an infant steel industry. Industrial diamonds, chrome, mica (illustration, cover), and manganese enter world markets.

Transportation problems have complicated exploitation of Brazil's natural resources. Mountains front the Atlantic, so that some coastal cities are walled off from the interior and are connected with each other only by sea. Rivers furnish local communication in much of the country, but railroads are constantly advancing and air lines are expanding. The bulk of Brazil's 48,000,000 people live along the coast or on the large central plateau.

Composed of United States

The largest city is Rio de Janeiro, the capital, whose sky line as seen from the Atlantic consists of mountain peaks, pinnacles, and granite buttes. The harbor, famed for its beauty, is dotted with palm-grown isles and fringed with inlets leading to tree-lined mountain avenues (illustration, next page).

Brazil's political structure of states and territories resembles that of the United States; in fact, its full name is the United States of Brazil. It was an empire from 1822 to 1889, when a bloodless revolution established a republic. Portuguese remained the national language.

As with Texas on a smaller scale, size is the most impressive fact about Brazil. Among the nations it ranks after the Soviet Union, China, and Canada. Every South American country but Chile and Ecuador touches Brazil's borders. It is three times as large as the neighboring

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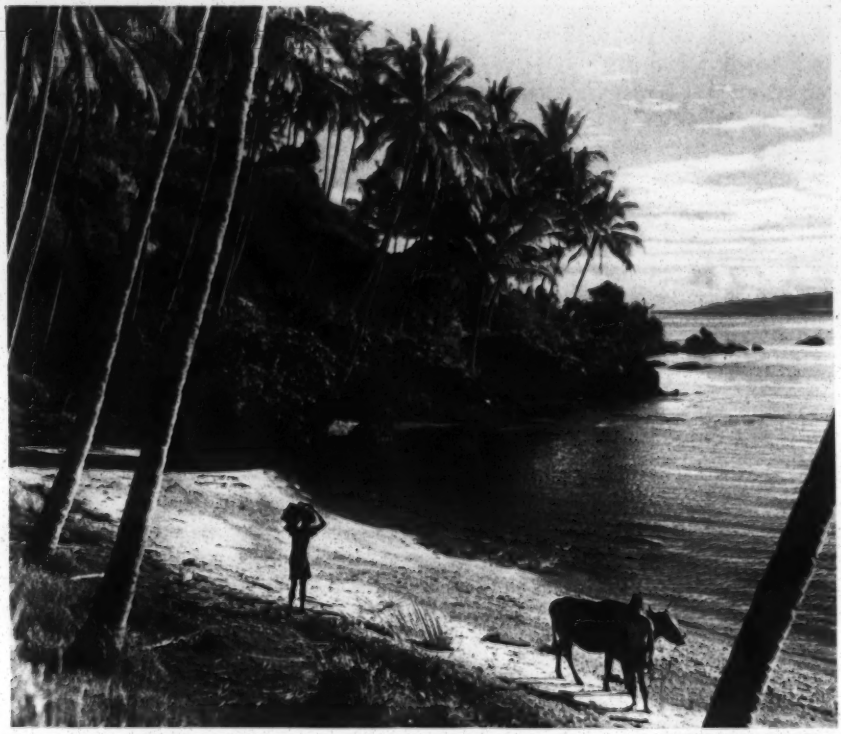
The Amboinese are just, good tempered, and intelligent. The men are strong, thickset, with dark skin, wavy hair, flat noses, and thick lips. Amboinese women are slender; they wear sarongs and blouses, ornament their hair with flowers, and are fond of fragrant native perfumes. They protect their heads with sunshades or with big flat trays on which they carry coconuts, bananas, and other produce. Amboinese soldiers formed a sizable and distinguished percentage of the colonial troops of the Netherlands Indies.

Dutch tidiness and orderliness is evident in the clean and well-built town (illustration, inside cover). European dress is largely the fashion. There are many fine homes and public buildings. Near the shore stands old Fort Victoria, constructed in 1605 and rebuilt in 1775, where Dutch troops massacred the British during the bitter struggle for the Indies' trade. The Dutch won out and held the "Isles of Spice" with few interruptions until the postwar emergence of a free Indonesia.

NOTE: Amboina is shown on the National Geographic Society's map of Southeast Asia. Write the Society's headquarters, Washington 6, D. C., for price list of maps.

For further information, see "Spices, the Essence of Geography," in the *National Geographic Magazine* for March, 1949; and "Airplanes Come to the Isles of Spice," May, 1941.



MAYNARD OWEN WILLIAMS

COCONUT PALMS OVERHANG THE BEACH ON AMBOINA ISLAND

These trees provide the Amboinese with copra—their money crop. Sago palms, usually thicker, are the staff of life. Bread is made from the starchy pith inside the trunks. Rain falls nearly every day, the wettest months being June and July. Waves from an earthquake recently covered coastal areas on this part of the island, reportedly demolishing two villages.

Bonneville Security Bars Sight-Seers

THE war in Korea—among its lesser effects—brings to the continental United States an echo of the tourist restrictions of World War II. For reasons of military security, the Bonneville Dam, 42 miles east of Portland, Oregon, has been closed to the public.

This means that some 600,000 visitors who annually have been attracted to the region will be denied a sight of the awe-inspiring power development. The government has taken this measure to prevent possible sabotage. Damage to the plant might cut off power from innumerable consumers—from the Oregon housewife in her electrified home to the manufacturer who produces the aluminum airplanes which pilots are flying in distant Korea.

Columbia Waters Provide Power

The Bonneville Dam was named for Captain Benjamin Bonneville, French-born West Point graduate, who explored the Rocky Mountains in the 1830's. It lies in the heart of the magnificent Columbia River Gorge. The 170-foot-high dam and the powerhouse and navigation lock span the river where Bradford Island divides it (illustration, next page).

The dam extends from the island to the shore of Washington State; the powerhouse and ship lock connect the Oregon shore with the island. They turn back the incoming tides from the Pacific Ocean and impound for electric power production the sea-bound waters of the Columbia River in a 47-mile reservoir.

When the Bonneville Dam first turned its turbines, in 1938, this region of the Pacific Northwest—with 13 per cent of the land area of the United States and only three per cent of its population—was devoted primarily to agriculture, forestry, and fishing. Cheap, plentiful electricity, provided by Bonneville and its sister dam at Grand Coulee, in Washington, has literally changed the life of the area.

During World War II, industries flocked there. Near-by Hanford, Washington, mushroomed as an important atomic-energy plant. It tapped an undisclosed volume of hydroelectric power and became a rival of the aluminum industry for the title of Bonneville's number one customer.

Region Needs Still More Power

Other buyers in the region include 24 public utilities districts, 15 cities, 31 co-operatives, seven private utilities, and four military establishments.

Today Bonneville's ten generators are running at full tilt. They produce an estimated capacity of 518,000 kilowatts. But still the power supply cannot take care of the demands of the fast-growing industries and population across Washington, Oregon, Idaho, and western Montana.

Another chapter in the story of Bonneville deals with the dam's navigation canal which has opened a new door to Washington State's inland empire around Spokane. Before the dam was built—with its canal, locks, and deep water pool—only about 400,000 tons of shipping plied beyond the Bonneville site on the unruly Columbia River. Today, along the canal

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Republic of Argentina. Its Amazon River basin is the world's largest drainage area.

Population is still spread rather thinly over the nation's vast expanse. At the middle of the 19th century the total was about 8,000,000. By the end of 1940 the figure was 41,356,000. Before World War I, Germans, Italians, and other immigrants came to Brazil by the hundreds of thousands. For many years the tide of immigration added from 100,000 to 200,000 newcomers a year to Brazil's population. States that felt the full force of this flood—São Paulo, for example—had boom periods like the ones that stirred California and Texas in the gold- and oil-strike times.

NOTE: Brazil appears on the Society's map of South America.

For additional information, see "Sea Fever," in the *National Geographic Magazine* for February, 1949; "Brazil's Land of Minerals," October, 1948; "Eclipse Hunting in Brazil's Ranchland," September, 1947*; "Brazil's Potent Weapons," January, 1944*; "Through Paraguay and Southern Matto Grosso," October, 1943*; "Air Cruising Through New Brazil," October, 1942; "Rio Panorama," September, 1939; "As São Paulo Grows," May, 1939; and "Wonder Island of the Amazon Delta," November, 1938. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00; issues unmarked are available at 50¢ a copy.)*

W. ROBERT MOORE

THE GLITTERING CURVE OF COPACABANA'S BEACH IS BACKED BY SOME OF RIO'S FINEST HOTELS

This portion of Brazil's capital and largest city fronts the open Atlantic. Most of Rio de Janeiro lies behind this picture, facing the nearly landlocked bay—one of the world's best harbors.

Bulletin No. 4, October 30, 1950

Why Jack-o'-Lanterns Symbolize Halloween

BRING on those gorgeous gourds—the big orange and yellow pumpkins. Jack-o'-lantern season is here.

Why is the carved pumpkin so well intrenched as the number one symbol of Halloween as celebrated in America (illustration, next page)? In the answer to that question lies the story of the mixed ancestry of Halloween itself.

Pagan Spooks and Spirits Survive

The jack-o'-lantern, to be sure, holds no direct connection to the church celebration that gave Halloween its name. A dozen centuries ago Christendom in Europe established All Saints' Day followed by All Souls' Day. The night in advance of this two-day festival of worship was declared a hallowed, or holy, eve in honor of the saints.

The church fathers evidently hoped, among other things, to supplant in some degree the paganism of autumn festivals, then already ancient, with the enlightened customs of a Christian observance. Out of it came the name of our popular but unofficial October 31st holiday—Halloween. But if they really thought to erase entirely the pagan tradition of an annual autumn vigil against spooks and evil spirits, they did not succeed.

That tradition had deep roots in practices of Greeks, Romans, Egyptians, Druids, and Celts. The Romans at harvesttime, for example, had long honored Pomona, their goddess of fruits and seeds. Bonfires marked their celebrations. Nuts and apples were the harvest tokens of their winter store of food.

The Druids of ancient Britain held a three-day festival to mark what was to them both the year's and the summer's end. To them, most of all, can be attributed many of Halloween's superstitions and beliefs. From them come customs of Halloween decoration, bonfires to scare off the ghosts that hover in the shadows, and images of goblins to add to the night's eerieness. To the Druids, a black cat was the perfect habitat for a departed human soul.

Pumpkin an American Plant

Thus the pumpkin jack-o'-lantern fits a mixed Halloween tradition, not only because it makes a weird and shadow-casting spook, but because it is part of the harvest. Out of it has come the filling for the pie, crowning proof that the harvest horn holds plenty.

Pumpkins and squashes are of Western Hemisphere origin, unknown in Europe prior to 1570 as far as records show. Since pre-Columbian times, Indians of North and South America have planted them in their fields of corn, and ranked them high as a food source.

Halloween is no longer the celebrated festival it once was in Europe and the British Isles. Pumpkins, a novelty in Europe in American colonial days, never have become part of the Old World's Halloween celebrations, and are termed "irrelevant" to the celebration of the autumn festival in a recent British newspaper article. The pumpkin Jack-o'-lantern, therefore,

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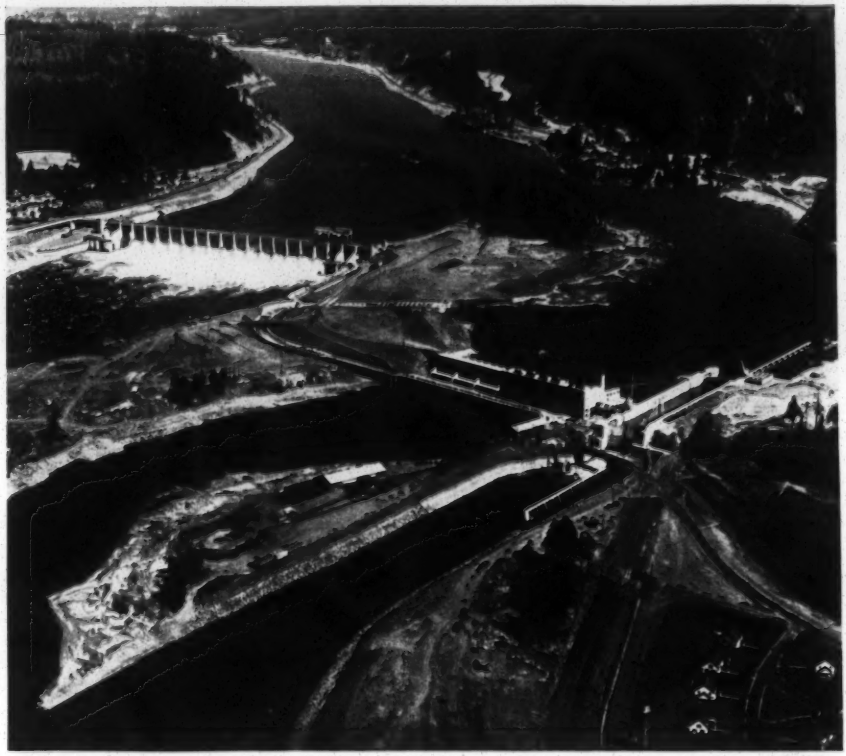
move more than 1,000,000 tons annually. The waterway makes it possible for ocean-going vessels to travel 200 miles inland on the river.

Bonneville's fishways were an added attraction for visitors. These devices were built to preserve the region's $10,000,000 fishing industry. Salmon, mainstay of the business, swim down the Columbia to the sea from shallow streams where they hatch. When mature, they swim back up the same streams to spawn in fresh water. They are caught for market in the ocean and in the river as they migrate upstream.

Fishladders and fish-locks were constructed to provide passage for these fish around the dam. Fishladders circle the dam from lower to higher level. Water flows over six-foot partitions, which the fish can easily jump. These partitions form a series of ascending pools. The fish-lock operates on the principle of a navigation lock. It lifts the fish which swim into it in the same manner that a ship is lifted to a higher level by the inrushing water of a navigation lock.

NOTE: Bonneville is shown on the Society's map of the Northwestern United States.

For further information, see "Oregon Finds New Riches," in the *National Geographic Magazine* for December, 1946; "Wartime in the Pacific Northwest," October, 1942; and "Columbia (River) Turns on the Power," June, 1941.



SPENCE

BETWEEN THE WOODED SHORES OF TWO STATES, THE COLUMBIA FLOWS DOWN TO BONNEVILLE

Fishladders loop across Bradford Island (center) and around the Washington side of the dam (left). The navigation canal (foreground) cuts off a chunk of Oregon, forming a small triangular island between Bradford and the shore. A fish-lock between the powerhouse and the ship lock provides a pathway upstream for the salmon which do not climb the fishladders.

Matterhorn Survives Cat-Conquest Indignity

IS Europe's mighty Matterhorn, majestically aloof among the lofty Alps on the Swiss-Italian border, so mighty after all? A cat, which not only looked at the king of mountains, but actually climbed it, raises the question.

Hundreds of men have scaled the Matterhorn. They include a blind man, and a cardinal who later became pope (Pius X). Scores of women, too, have won its summit. All got there the hard way. And in the closing days of the 1950 climbing season, a stray, or truant, cat, without benefit of ropes, pickax, or human aid, skittered to the top in the van of a party of veteran climbers.

Only the Skilled Try

Has the Matterhorn lost stature? The cat to the contrary, the answer is no. The bleak rock pyramid soars 285 feet higher than California's 14,495-foot Mt. Whitney, tallest peak in the 48 states. Though eclipsed in height by such giants as Everest, McKinley, and Aconcagua, the Matterhorn is and ever will be mighty, measured by man's ability to climb.

The peak's human conquerors invariably have been seasoned alpinists who have conditioned themselves for months or years on strenuous climbs. Almost as invariably, they have engaged one of the expert licensed guides who live in Zermatt, a village near the Matterhorn's Switzerland base, and who take several parties on the hazardous two-day ascent in the course of the short climbing season from mid-July to late August.

Thus their success is hardly accidental. Nor are failures ever a complete surprise, for scores have lost their lives in falls from the sheer rock slopes that were proof against climbers for almost a century after neighboring Mt. Blanc had been conquered. On a tombstone in Zermatt's cemetery, one of many graves of victims bears the sufficient inscription: "He died not far from here."

Tragedy marred the success of the very first Matterhorn conquest. Edward Whymper, an Englishman, led the first conquering party to the crest on July 14, 1865, and lived 46 years thereafter to recount the tale. But four of the six others with him fell to their deaths in attempting the descent. One of the four bodies, that of Lord Francis Douglas, brother of the Marquis of Queensberry of boxing-rules fame, was never recovered.

Zermatt Is Winter Sports Center

Casualties now are comparatively rare, thanks to ropes maintained along critical stretches and huts equipped with food and supplies. Italy and Switzerland share the summit peaks (illustration, next page), where the alpinist lingers but briefly in chilling wind to gaze in awe at the surrounding mountain giants, glaciers, and green valley strips of the two countries. Mt. Blanc's outline is visible in clear weather far to the west where Italy meets France.

At Visp in the Rhone Valley, visitors to Switzerland board the narrow-gauge railroad for Zermatt and the Matterhorn. The cars climb 3,150 feet in the 22-mile southward trip up the Nikolai Valley, aided by rack-and-

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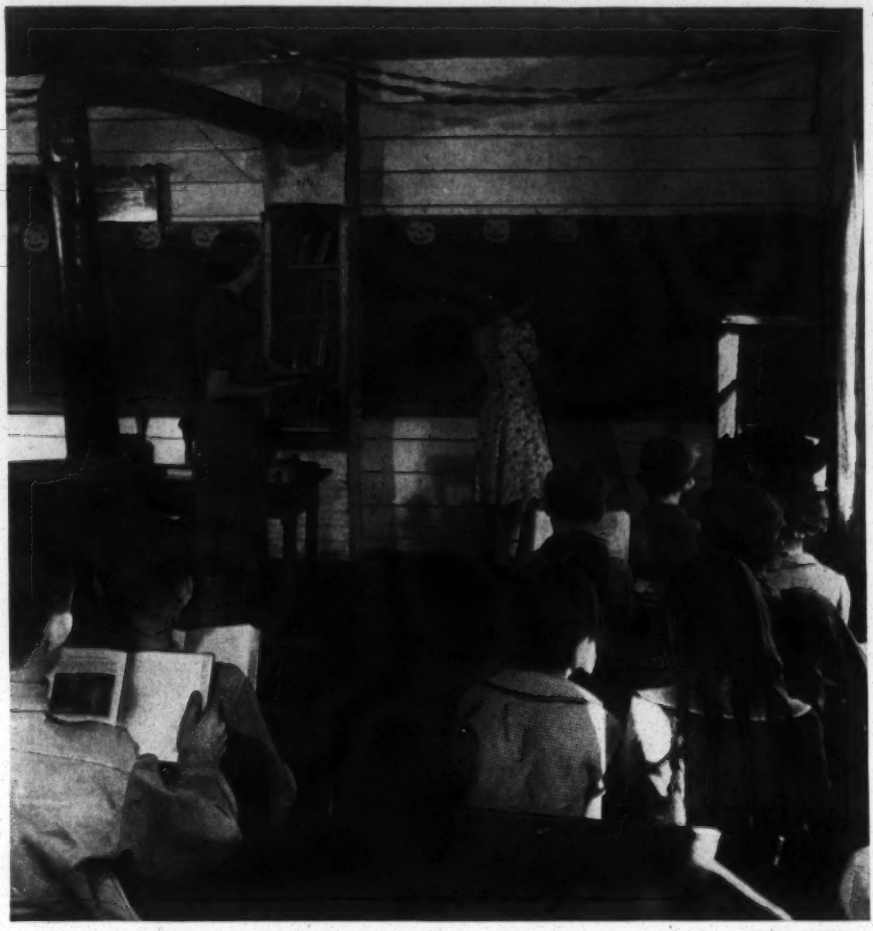
is an inseparable part of Halloween only in the New World version.

NOTE: For additional information on festivals, see "Carnival in San Antonio," in the *National Geographic Magazine* for December, 1947; "Empire State Onions and Pageantry," November, 1941*; "Carioca Carnival (Rio de Janeiro)," September, 1939; "Costume Pageants in the French Pyrenees," October, 1937*; and "Mexican Indian Flying Pole Dance," March, 1937.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, April 24, 1950, "Guaymi Indians of Panama Enjoy April Fiesta"; "Shetland Up-Helly-Aa Marks Viking Heritage," February 20, 1950; "Mexico's Fiestas Combine Religion, Gaiety," January 30, 1950; and "Pumpkin by Any Other Name Tastes as Good," November 21, 1949.



J. BAYLOR ROBERTS

THIS ONE-ROOM LOG SCHOOLHOUSE NEAR GALENA, MISSOURI, IS DECORATED FOR HALLOWEEN

The "schoolmarm" teaches all eight elementary grades. Children sit by pairs in double desks. The stove furnishes heat. In spite of steps taken all over the country to consolidate rural school districts and provide more facilities in bigger schools, 70,000 one-teacher schoolhouses remain.

A giant land tortoise rambles freely about the grounds of Plantation House, residence of the British Governor of St. Helena, South Atlantic island of Napoleon's exile, 1815-1821. Said to be at least 175 years old, the tame turtle is called the only living link in the world with Napoleon.

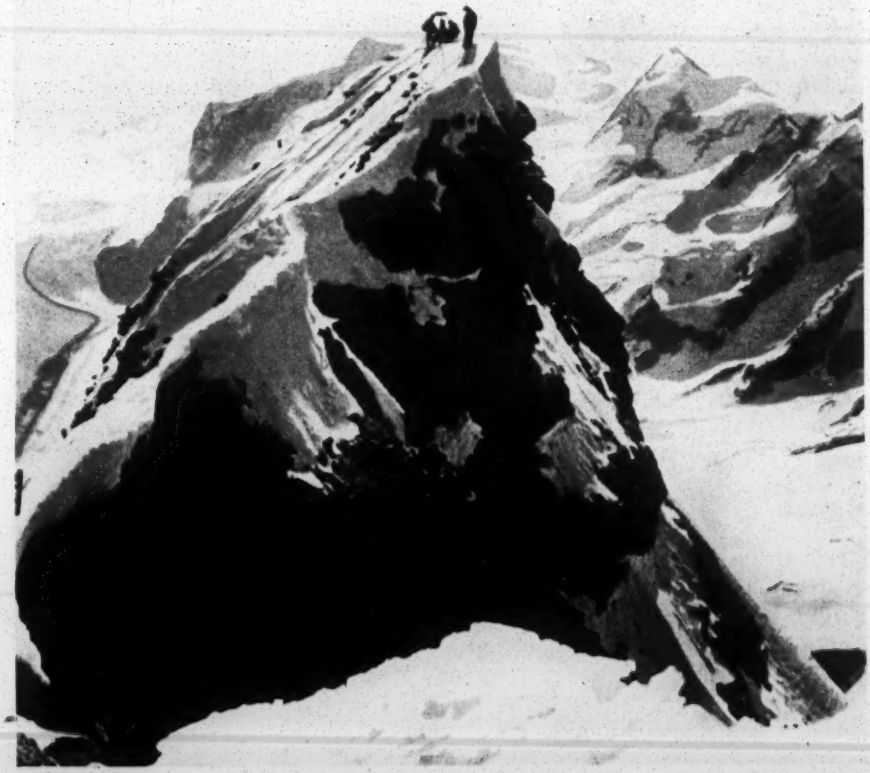
pinion gear. Mile-high Zermatt's population of 1,300 consists chiefly of alpinist and winter sports guides, keepers and staffs of 25 inns and pensions, and their families. Skiing, sleighing, curling, and hockey feature the winter sports program.

So that visitors may view the Matterhorn at close range without exertion, the highest open-air railway in Europe ascends 4,870 feet in its five-and-a-half-mile climb from Zermatt to the summit of the Gornergrat, surrounded by snow-capped peaks and glaciers.

NOTE: The Matterhorn is shown on the Society's map of Europe and the Near East.

For further information about mountain climbing, see "Skyline Trail from Maine to Georgia," in the *National Geographic Magazine* for August, 1949; "Cloud Gardens in the Tetons (Wyoming)," June, 1948; "First American Ascent of Mount St. Elias," February, 1948; "Climbing Mighty Minya Konka," May, 1943*; "Conquest of Mount Crillin," March, 1935; and "Manless Alpine Climbing," August, 1934 (out of print; refer to your library).

See also, in the GEOGRAPHIC SCHOOL BULLETINS, February 13, 1950, "Kilimanjaro Challenges Ablest Mountaineers"; and "Men Again Challenge India's Killer Mountain," February 14, 1949.



MIRIAM O'BRIEN UNDERHILL

ON THE ICY SWISS SUMMIT OF THE MATTERHORN, CLIMBERS PAUSE BRIEFLY BEFORE DESCENDING

Though it presents a solid pyramid shape as seen from the valley, the Matterhorn actually has two peaks. This picture was taken from the Italian summit by the first woman to scale the Matterhorn without masculine aid. The Swiss summit is 14,780 feet high; the Italian, a few feet lower.